The gilt-edged market: developments in 1993

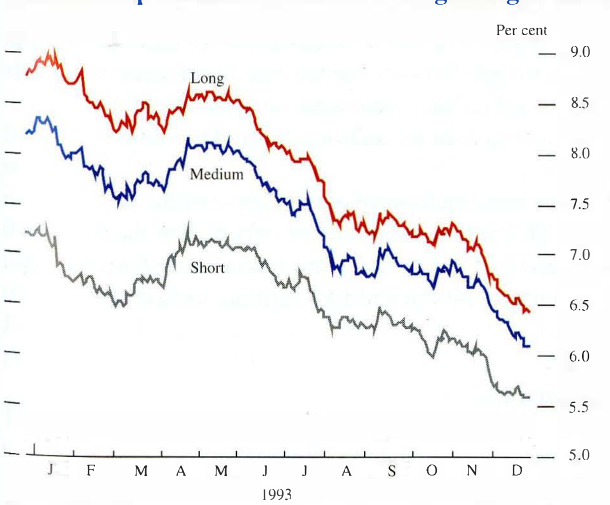
The gilt-edged market was affected by a number of developments in 1993. Despite the size of the PSBR, the funding of which has substantially increased the size of the gilt-edged market, yields fell markedly. This reduction in yields mirrored developments in other OECD government bond markets; it also reflected the lower level of inflation and, perhaps more importantly, lower inflation expectations in the United Kingdom. Against this background, the PSBR was funded without serious difficulty. This article, which continues the annual series begun in 1989 on the gilt-edged market, describes gilt sales and market turnover, as well as developments in the derivatives markets and the business of the gilt-edged market makers during 1993.

Gilt funding in 1993

The decline in yields

In 1993, gilt yields fell sharply. The scale of the fall was much greater than many had expected, particularly at the long end where yields fell to their lowest levels for some 30 years. Over the year, the spread between the 5-year and the 20-year par yields narrowed from 145 basis points to 69 basis points. The bulk of the reduction in yields occurred in the second half of 1993. Although the rally which followed sterling's withdrawal from the ERM continued in the early months of the year, yields rose temporarily after the March Budget announcement of a 1993/94 PSBR of £50 billion, which was at the upper end of market expectations. After the November Budget, which forecast a lower than expected 1994/95 PSBR, medium and long-term yields fell by around 50 basis points (see Chart 1).

Chart 1
Yields on representative conventional gilt-edged stocks(a)



(a) Representative stocks: short—7¼% Treasury 1998; medium—8% Treasury 2003; long—9% Treasury 2012.

Chart 2 shows the yields on representative 10-year bonds in the United Kingdom, the United States, Germany and France. As it indicates, the gilt market was not alone in seeing yields decline through the year; at times, however, the relative stability of monetary policy and of the exchange rate—which was less affected than in most other European countries by speculation about German interest rate movements—made the UK market particularly attractive to overseas investors. The 10-year gilt yield spread over the German Bund narrowed to around 50 basis points, the lowest for over 20 years.

Chart 2
Yields on representative 10-year government bonds

Table A shows the rate of return that would have been achieved on an investment at the start of the year in representative 5 and 10-year gilts; a representative basket of stock market shares (using the FT-SE 100 index); and a twelve-month interbank placement. These figures take into account not only dividends accruing on the stocks but also changes in the capital values resulting from movements in yields. They do not therefore provide any guide as to rates

Table A
Rate of return on investment over calendar year

Per cent

	5-year gilt	10-year gilt	FTSE 100	12-month interbank
1992	19.7	18.7	19.8	10.6
1993	12.9	19.4	24.2	6.8

of return in the future. Comparable figures for a sterling-based investor placing money in 10-year US Treasury bills and 10-year German Bunds would have been 31.5% and 24.1% respectively for 1992, and 7.4% and 2.1% in 1993. These data are of course affected by currency movements.

Stocks issued

The total nominal value of gilt-edged stock outstanding rose from £144.1 billion at end-1992 to £190.5 billion at end-1993. Gross issues amounted to £52.6 billion and redemptions were £6.3 billion. Of the gross issues, £9.6 billion were made in the 1992/93 financial year (ie in the first quarter of 1993) and the remaining £43.0 billion were made in the current financial year.

Chart 3
Market holdings of gilt-edged stock: market value

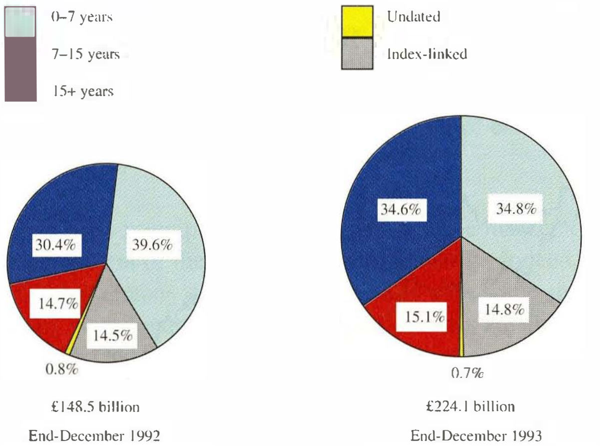


Chart 3 shows the maturity breakdown, at market prices, of all gilts in market hands at the end of 1992 and 1993. The small increase in the share of the 15-year-plus figure masks a decline in its share of the nominal value of stock in market hands, since this decline was more than offset by the relative increase in the price of long-dated stock over the year as the yield curve flattened. None of the conventional stocks issued during the year matures before 1998; as a result, the zero-to-seven-year bracket was in practice a five-to-seven-year bracket. The bulk—£24.4 billion—of new conventional issues has consequently fallen into the 7-to-15-year bracket.

Five new conventional stocks were created during the year. The drop in yields created a need for new current coupon stocks[1] at certain maturities, and new current coupon 5 and 10-year benchmark stocks for 1994 were created in the September and October auctions. The coupons on these stocks—at 6% and 6¾% respectively—were both 1¼ percentage points below the 5 and 10-year benchmarks created towards the end of 1992, underlining the intervening reduction in yields. As in 1992, all new stocks issued had FOTRA status, enabling interest to be paid free of tax to overseas holders. No new index-linked stocks were created during the year.

In addition to issues of new stocks, the authorities continued to re-open existing issues to meet market demand and to build up large, liquid benchmark stocks in a range of maturities. Four of the nine auctions added to existing stocks; other additions were made by way of tap sales. There are now six stocks with more than £6 billion outstanding, of which the largest are the 1993 5 and 10-year benchmarks, the 7¼% 1998, at £7.8 billion, and the 8% 2003, at £7.6 billion. There are a further five with at least £5 billion; the shortest dated of these matures in 1997. By comparison, there were only three stocks with more than £5 billion outstanding at end-1992. But despite this change, the largest 10 stocks accounted for around one third of the total both at end-1992 and end-1993, as the size of the large benchmark stocks rose broadly in line with the total stock of gilts outstanding.

There were additions through the year to existing index-linked stocks in a broad range of maturities—from 1996 to 2030—allowing a further increase, to 14.8%, in index-linked gilts as a share of the total in market hands. Three of the 14 index-linked stocks now exceed £2 billion nominal; at end-1992 the largest four were between £1.5 billion and £1.9 billion. At market prices, the average size of index-linked stocks rose 54% to £2.4 billion, boosting their liquidity. Demand for index-linked stocks remained steady despite lower inflation, as investors were attracted by the prospect of capital gains as real yields fell.

Method of stock issuance

The authorities continued the mixed approach to funding of using both auction and 'tap' sales. Sales of stock were made in both fully paid and partly paid form. Because of the large PSBR, the authorities announced in March that auctions, which had previously been held roughly every two months, would be held at broadly monthly intervals. This framework established a reasonably regular pattern of auctions which were normally held on the last Wednesday of each month. The opportunity was taken, nevertheless, to omit the auction in August (in part because the funding programme was well advanced) and in November (immediately ahead of the Budget), and to hold an auction early in December.

There were nine auctions over the course of the year for a total of £27.7 billion nominal, just over half of the total stock issued (see Table B). The auctions were for amounts of between £2.5 billion and £3.5 billion—on average 30%

Table B
Auction details

Stock	Date of auction	Amount £ millions	Average yield	Cover	Tail (basis points)
8½% 2007 B	27 January	2,500	8.75	1.18	3
8% 2013	31 March	3,000	8.53	1.96	—
7¼% 1998 A	28 April	3,000	6.98	1.77	1
7¾% 2006	26 May	3,000	8.39	1.56	—
8% 2003 A	30 June	3,250	7.72	1.10	6
7% 2001	28 July	3,250	7.46	2.29	—
6¾% 2004	29 September	3,250	7.06	1.18	3
6% 1999	27 October	3,500	6.24	1.56	1
6¾% 2004 A	8 December	3,000	6.51	2.19	—

(1) The authorities have a preference for issuing stocks with a coupon close to current yields.

Survey of Central Gilts Office holdings

As part of the Chancellor of the Exchequer's initiative to improve the quality of official statistics, the Bank of England has been investigating ways of improving the available data on sectoral holdings of, and transactions in, gilts. The official data are published quarterly by the Central Statistical Office (CSO) in *Financial Statistics* and are derived from a variety of sources. Because of the need—in the absence of direct reports—to use estimates for some of the sectoral data, some of the statistics are at present liable to contain significant margins of error.

As over 80% of gilts by value are held by or through members of the Central Gilts Office (CGO), the Bank conducted a survey of these members at 31 March 1993. The survey sought a sectoral analysis of the total holdings in members' accounts, based as closely as possible on beneficial ownership. In many cases, this required manual data collection, as the data were not readily available from existing computer systems. All CGO members responded to the questionnaire and the Bank is very grateful to them for their co-operation.

The aggregate results have enabled the Bank to improve the quality of estimates. There remain, however, some holdings which members were unable to classify, and some problems with the sectoral allocation of other nominee holdings and with combining the survey information with that from other sources.

The principal government stock register, for which the Bank acts as Registrar, was also a potential source of data. The aggregate statistical information that can be derived from the Register is of only limited value, however, because the beneficial ownership of stocks is not known to the Registrar. Nevertheless, combining data from the Register with those from other sources and with the survey results has produced a more accurate picture of the sectors of the underlying holders. The data were, though, still affected by the problem of allocating nominee holdings, and so, on the basis of what was known about the likely beneficial owners, the amounts which could be attributed to nominee holdings were allocated among sectors. It is these combined and adjusted data that are presented in Table C of this article.

The survey has improved understanding of the beneficial ownership of gilts and, for that reason, the Bank hopes to repeat it at 31 March 1994 and at each 31 December thereafter. The results are also likely to improve the National Accounts data to be published by the CSO later this year. In the meantime, work will continue, in conjunction with the CSO, to improve the existing data sources which this exercise has enlarged.

larger than the previous year—and the average level of cover, over 1.6 times, was marginally higher than the previous year. On the three occasions when cover was below 1.5 times, the tail (the difference between the average yield and the highest accepted yield) was unusually high at between three and six basis points, compared with between zero and one basis point at the other six auctions and in the auctions held in 1992. But the low level of cover did not reflect a lack of underlying demand for gilts: on each of the three occasions when cover was low, the market had rallied strongly and the auction came at a time when prices had reached local highs, with market participants uncertain about the sustainability of those levels. All three auctions were followed immediately by a renewed market rally, enabling the authorities to issue tap stock the same day for the January and June auctions, and two days later for the September auction.

The remaining £24.8 billion nominal of stock was sold on tap to the GEMMs, enabling the Bank to respond quickly and flexibly to evident demand for stock—both conventional and index-linked—across a range of maturities. This flexibility allowed the authorities to issue into rallies between auctions. As a result, when gilts shared in the substantial rally in government bond markets worldwide, and sterling assets generally benefited from uncertainty about the future path of European interest and exchange rates as tensions developed in the ERM towards the end of July, the authorities were able to secure large-scale funding while at the same time ensuring that the market's demand for stock was satisfied in an orderly fashion.

Sectoral breakdown of gilt holdings

A survey of Central Gilts Office holdings as at 31 March 1993 forms the basis for the estimated sectoral breakdown of gilt holdings shown below in Table C (see the box for a more detailed description of the survey). Although comparable data are not available for previous years, the

Table C
Analysis of gilt holdings

	31 March 1993	
	£ billions	Per cent
Market value of all gilts	168.1	
Official holdings	8.4	
Market value of market holdings	159.7	100
Total UK holdings	**128.2**	**80.3**
of which:		
Other public sector	*0.4*	*0.3*
Banks	*9.6*	*6.0*
Building societies	*4.5*	*2.8*
Other financial institutions	*91.5*	*57.3*
of which:		
Insurance companies	*60.2*	*37.7*
Pension funds	*29.1*	*18.2*
Other	*2.2*	*1.4*
Industrial and commercial companies	*3.2*	*2.0*
Personal sector	*19.0*	*11.9*
Overseas holdings	**31.5**	**19.7**

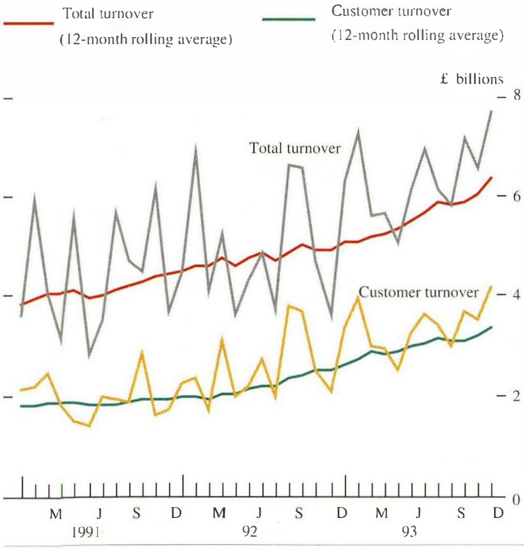
percentage of gilts held by both banks and building societies, and by overseas residents, has been rising, and appears to have continued to increase through the year.

The publication in mid-March of a brochure 'Investing in Gilts: a guide for the small investor', together with an increase in press advertising of the auctions, generated a substantial increase in non-competitive bids by retail investors at the auctions. The number of non-competitive bids rose from an average of 180 up to March to 1,050 subsequently, though it fell from the peak of 2,070 in April to 890 in December. The average size of non-competitive bids has been smaller, at £7,650 compared with £9,650 before April, presumably because many larger retail investors were already participating. A second, more detailed guide—'British Government Securities: the Market in Gilt-Edged Securities'—aimed at those with a professional interest in the market, was published in May.

Turnover in the gilt market

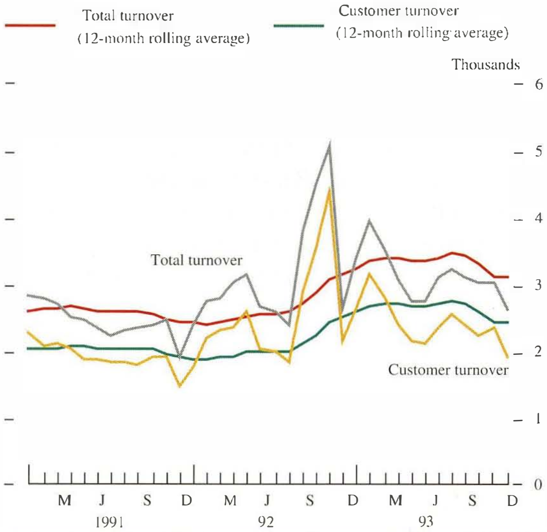
Chart 4 shows total turnover in gilts by value, which increased from a daily average of £4.9 billion in 1992 to £6.3 billion in 1993. As in the previous two years, this represented a little under 4% of the average stock of gilts outstanding. The value of gilt stocklending increased by 26%, in line with total turnover. The average level of outstanding stocklending was £7.6 billion, and peaked in early May at £9.5 billion.

Chart 4
Average daily turnover: by value



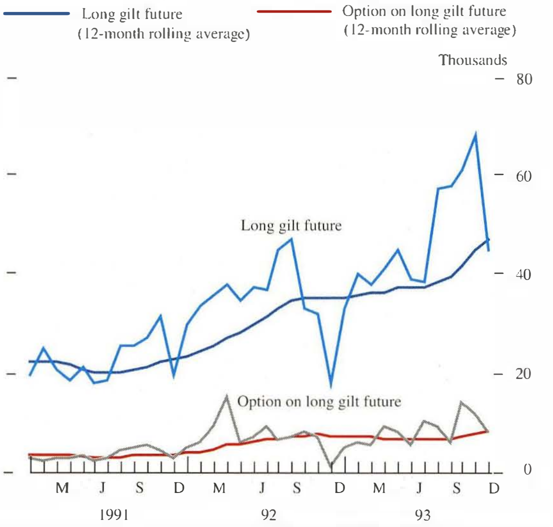
Customer turnover by value also increased, from £2.5 billion to £3.3 billion a day, peaking in December following the end-November Budget. The average size of customer deals rose by nearly 40% to £1.4 million. But the number of bargains fell marginally from 2,500 a day to 2,400 and, with a peak of only 3,100, compared with an average daily number of bargains in October and November 1992—following sterling's exit from the ERM—of 3,600 and 4,400 respectively (see Chart 5).

Chart 5
Average daily turnover: bargains



As Chart 6 shows, turnover in 1993 in the LIFFE gilt derivatives—the long gilt future contract, and the option on the future—continued to grow. Turnover of the future averaged 46,600 contracts daily. This was 34% higher than

Chart 6
LIFFE gilt contracts: number of contracts

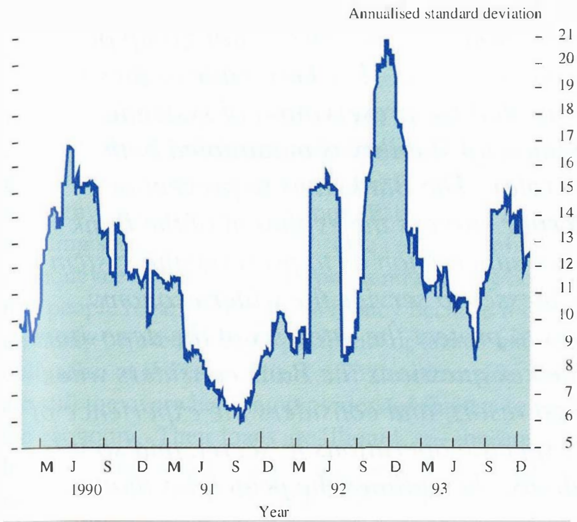


in 1992 (which itself had been over 50% up on 1991). The increase appears to have reflected growing familiarity with these derivatives, and increased turnover in the underlying gilts (as some investors use derivatives to hedge their 'cash' positions) rather than any greater uncertainty about the markets. In fact, volatility declined steadily through the first half of the year, and never reached the peaks seen in September 1992 (see Chart 7).[1] Prices were more volatile in the second half of the year. The unexpectedly disappointing data on inflation published in mid-September, coupled with weaker than expected data on retail sales, led to a set-back in the markets: the long gilt future contract fell

(1) The volatility series has been calculated from the standard deviation of the daily percentage changes in yields, using a backward-looking three-month window.

sharply, and turnover increased substantially. The turnaround in expectations with the publication of an unexpectedly low inflation figure in November, coming close to the Budget, resulted in a daily high of 128,800 contracts traded following the base rate cut.

Chart 7
Volatility of 10-year par yield



Average daily turnover in options on the long gilt future contract was 14% higher in 1993 than in 1992, and was more than twice the level of 1991. Turnover reached its highest in October, with an average daily figure of 14,200 contracts—below the April 1992 figure of 14,900, but well above the year's average of 8,100. There was increased interest from May onwards in OTC derivatives, with a variety of options and warrants issued, for settlement in cash or by physical delivery, and including options relating to the yield differential between gilts and foreign government bonds. This increased activity was no doubt encouraged by the prolonged market rally in both UK and European bond markets and a desire by investors to enter the market, on a leveraged basis, before prices rose further. No gilt repackaging schemes were brought to the market, although the Bank remains willing to consider proposals for such schemes whether involving conventional or index-linked gilts.

GEMMs' financial performance

The GEMMs as a group saw slightly lower post-tax profits than in 1992, at £58 million (see Table D). But the substantial increase in capital employed resulted in a sharp fall in the post-tax return on average capital from nearly 13% in 1992 to around 9%. Whereas GEMMs benefited from the two particularly sharp market movements in 1992 (associated with the general election and the period following the suspension of sterling's membership of the ERM), profits were made on a more consistent basis during 1993, helped by the substantial and sustained rise in gilt prices through much of the period. Nevertheless, as in previous years, a handful of firms made losses for the year as a whole.

Table D
Capitalisation of gilt-edged market makers

£ millions

	Oct. 1986–end-1988	1989–1990	1991	1992(a)	1993(a)
GEMMs' capital at beginning of period(b)	595	420	395	432	511
Net injections or withdrawals of capital	+15	-53	-12	+15	+164
Operating profits (+)/ losses(-)(c)	-190	+28	+49	+64	+59
GEMMs' capital at end of period	420	395	432	511	733

Source: Bank of England.

(a) Data for 1992 have been revised. Data for 1993 are provisional.
(b) Capital base, as set out in the Bank of England's 'Blue Paper' ('The future structure of the gilt-edged market') published by the Bank in April 1985 and reproduced in the June 1985 *Bulletin*, pages 250–87.
(c) Net profits/losses after overheads and tax.

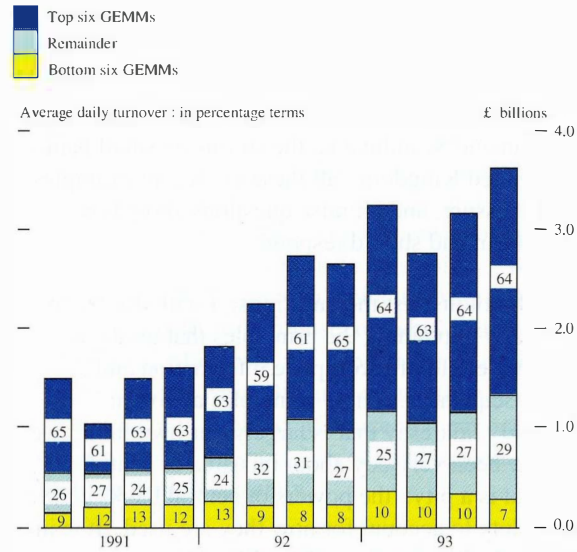
The amount of new capital dedicated to the gilt market increased substantially during 1993, to a level which exceeded that at the time of Big Bang. In large part, this reflected capital injected to support business other than gilt-edged market making itself, but it was also associated with a new entrant to the market in November, taking the total number of GEMMs to 20.

The number of Stock Exchange money brokers and inter-dealer brokers (IDBs) remained unchanged in 1993, at eight and three respectively.

Retail trade

Chart 8 graphs GEMMs' retail trade: that is, GEMMs' trade with clients and agency brokers (but excluding that with IDBs, direct trades with other GEMMs and the Bank, and identified dividend business[1]). The share of the top six GEMMs was broadly unchanged at around 64%, while the share of the bottom six was affected by the entry of a firm into the market; in the recent period, only the share between the fourth quarter of 1992 and the third quarter of 1993 is unaffected by the entry or exit of firms.

Chart 8
Distribution of GEMMs' retail turnover(a)



(a) Excluding identified dividend business.

(1) 'Dividend business' is the sale (purchase) of a stock cum dividend and the purchase (sale) of the same stock ex dividend to and from the same client.